



EST3 Paging & Fire Phone Hardware

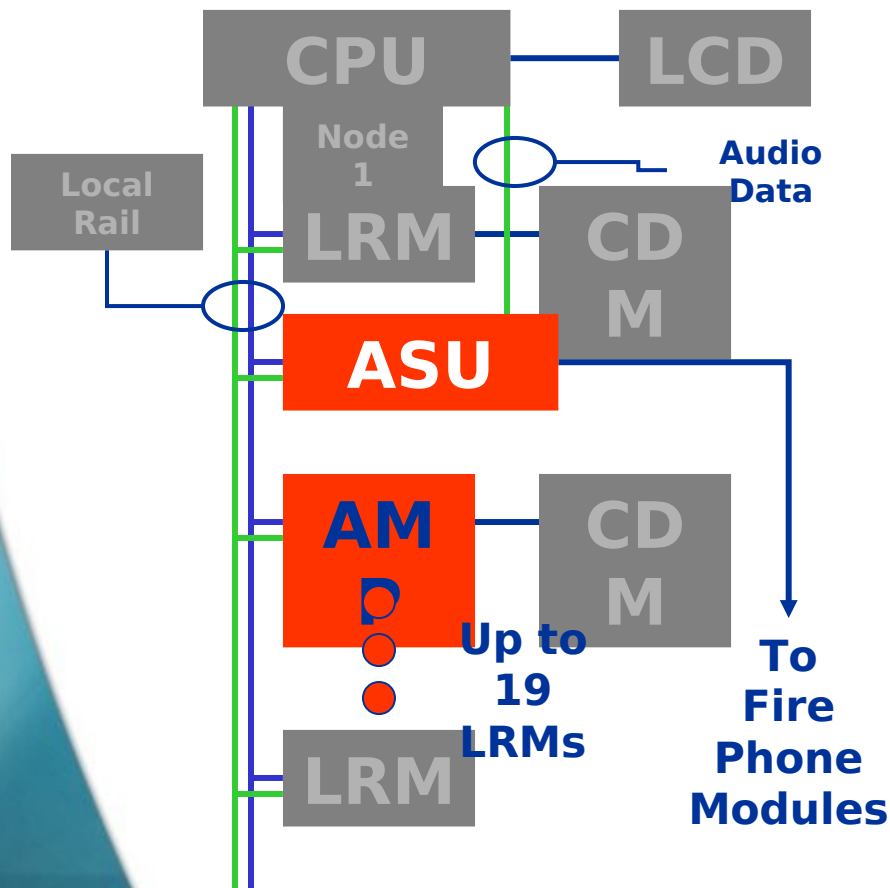


EST3 with Audio

- **Integral to Panel**
- **Seamless Addition**
- **Digital vs Analog**
- **8 Channels Over a Single Pair**
- **Zoned Amplifiers**
- **Field Programmable Messages**

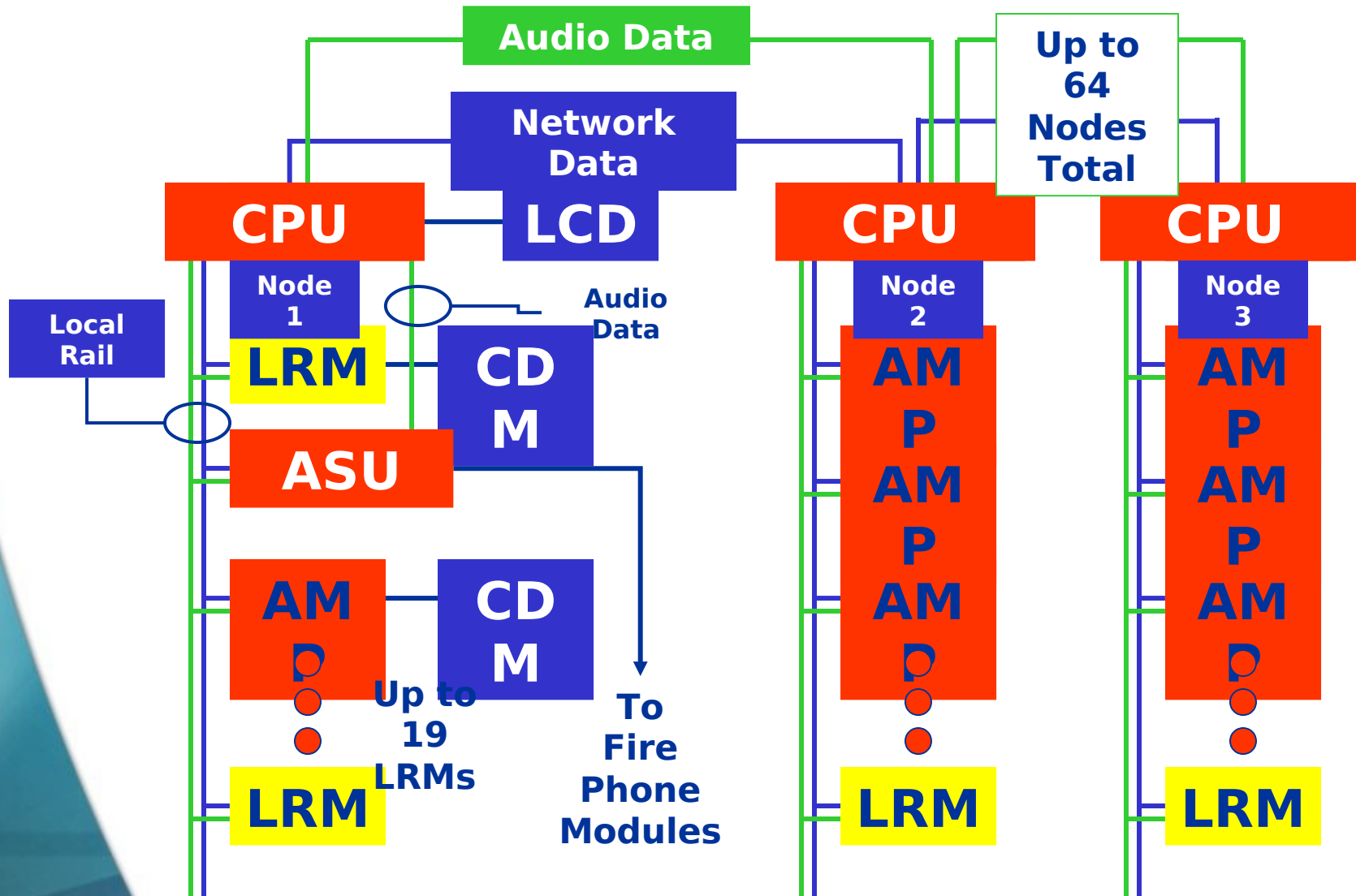


EST3 with Audio

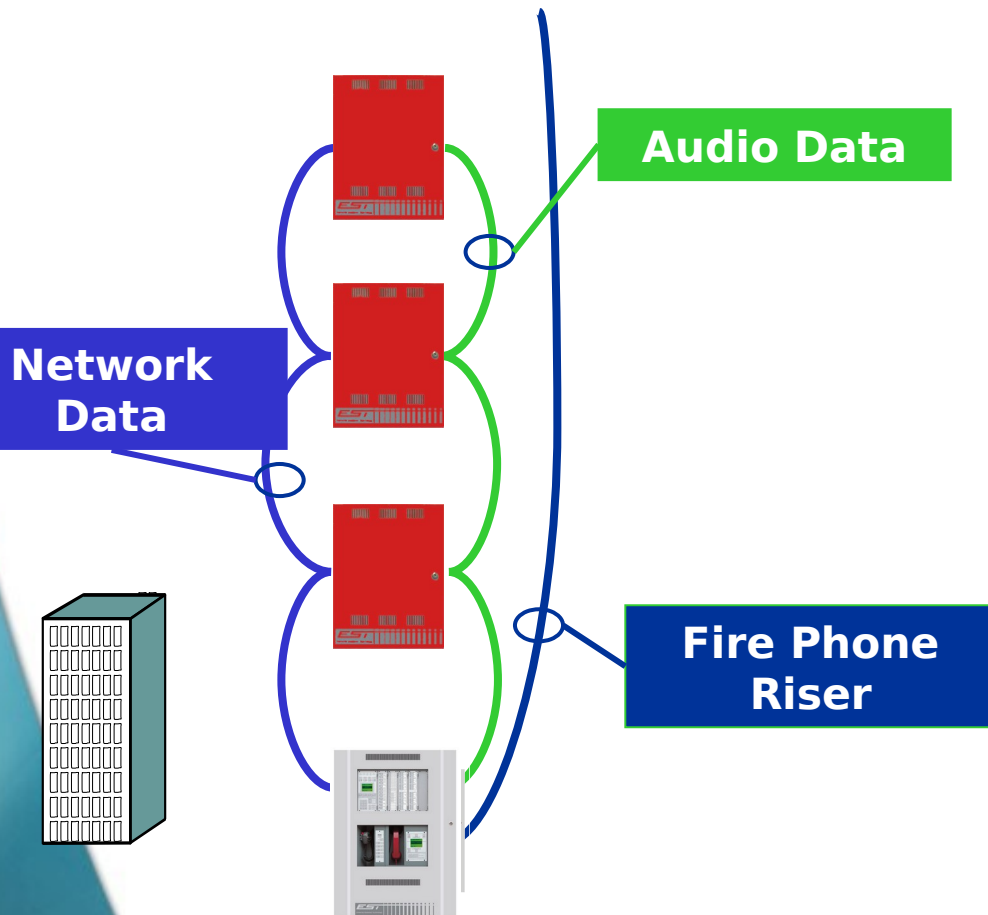




EST3 Network /w Single ASU



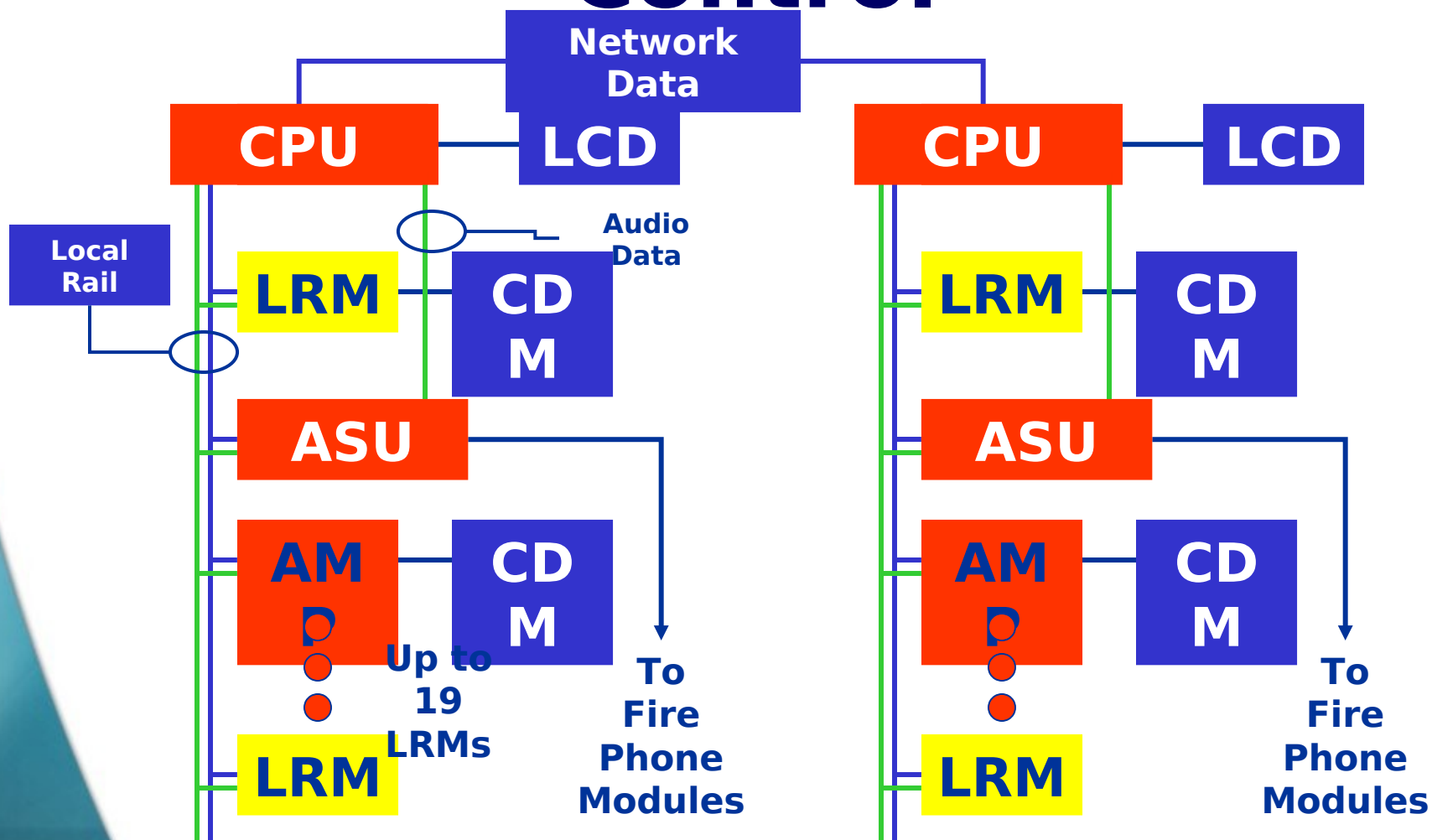
Single Building Audio



- High speed audio data is RS485 Class 'B' or 'A'
- Can use Fiber
- 2 wire pair carries 8 audio channels
- Analog phone riser to SIG modules, Class 'B' or 'A'

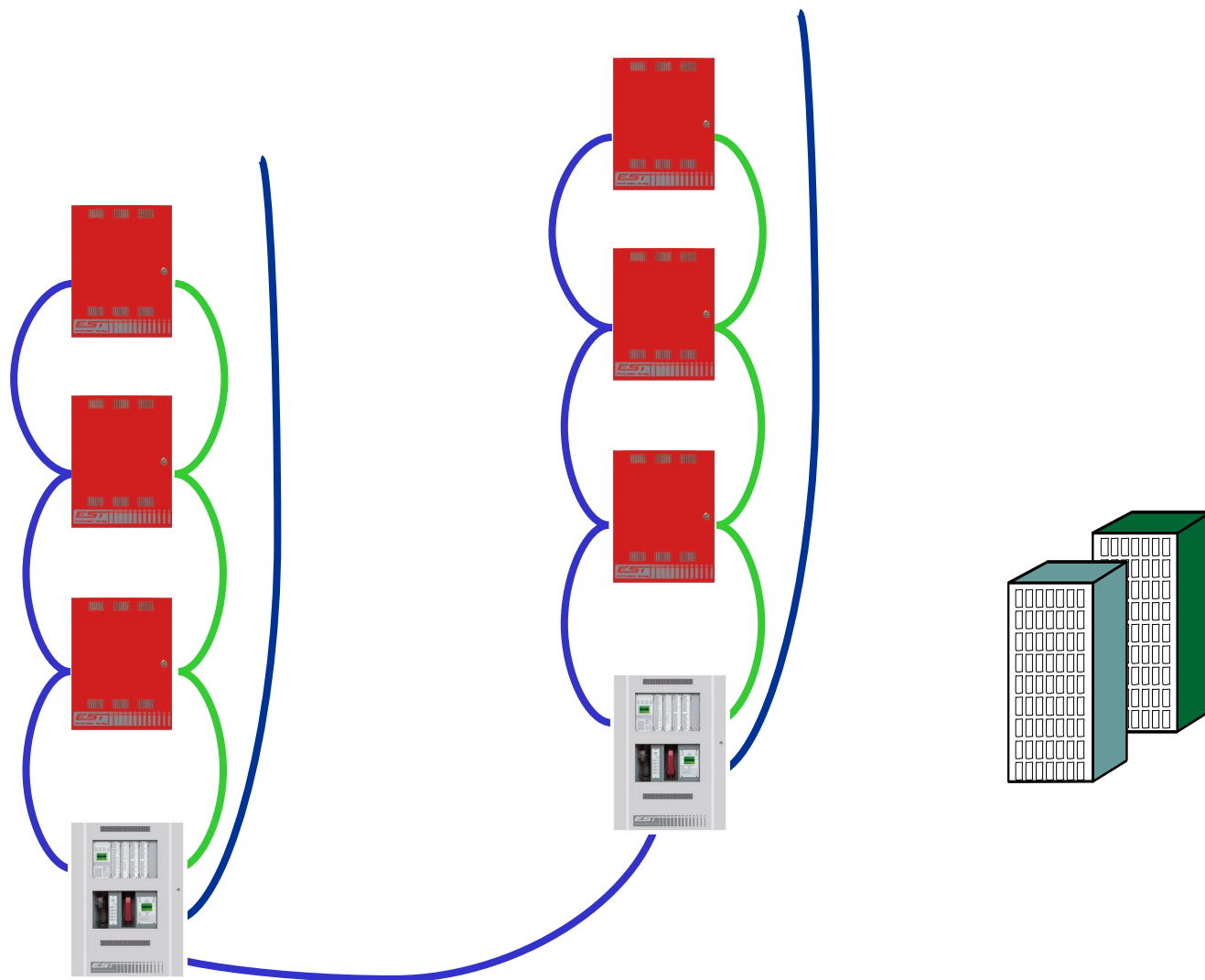


EST3 /w Multiple Audio Control

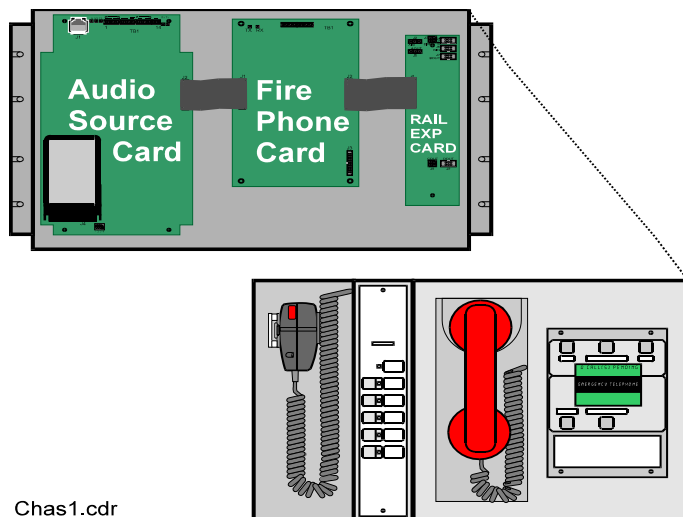




Multiple Building Audio



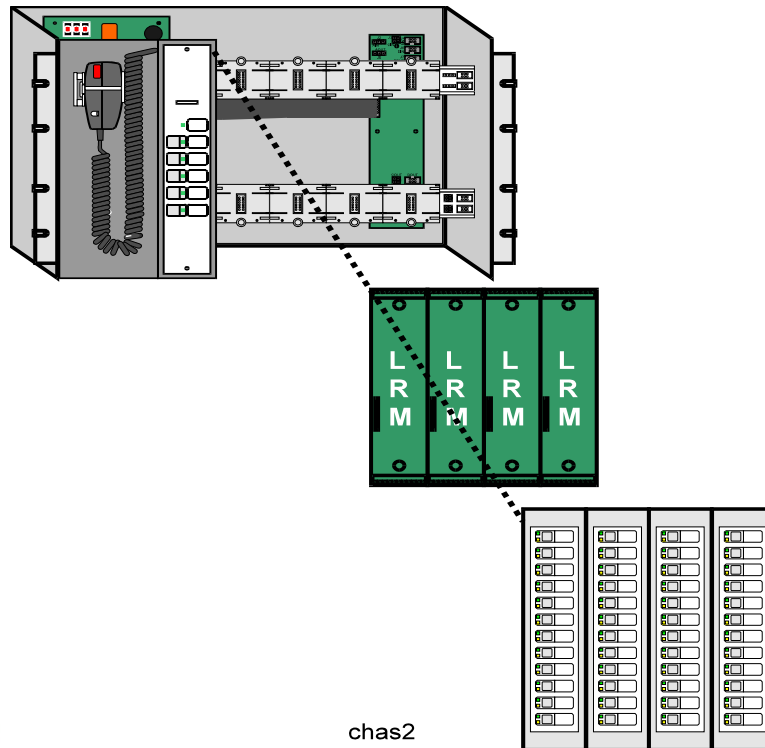
Audio Source Unit /w Phone



Chas1.cdr

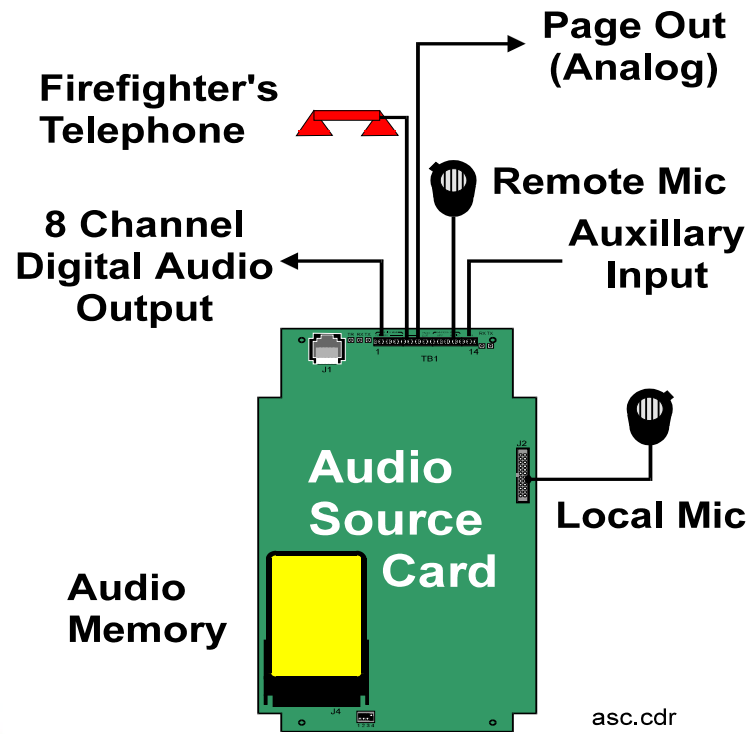
- **3-ASUFT** supports both page control & fire phone
- **Control modules** mount to back of a chassis
- **User interface** mounts on top

Audio Source Unit w/o Phone



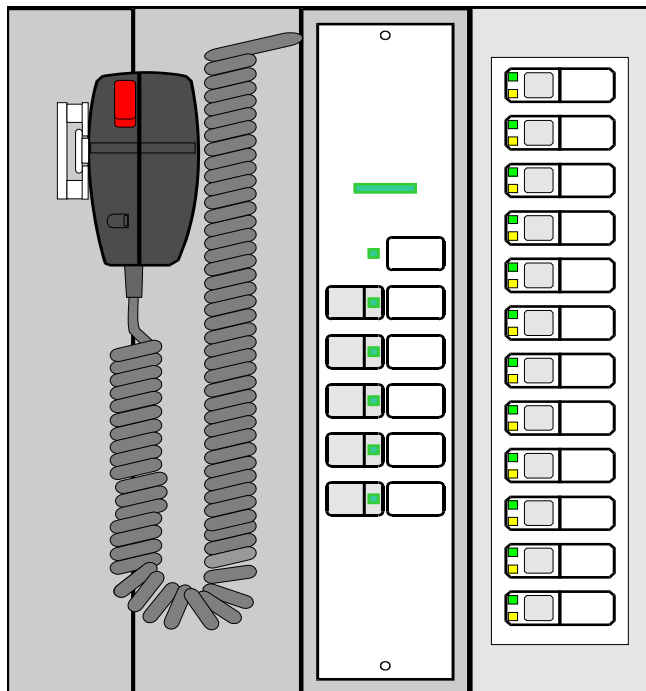
- 3-ASU support paging only systems
- Rail space for up to four LRMs
- LRMs could be amplifiers
- Control display modules mount to LRMs

Audio Sources



- **Analog sources**
 - local microphone
 - fire phone
 - remote mic
 - auxiliary input
- **Audio memory**
- **8 channel digital**
- **Page out**

Paging Control



page2

- **Simple to use**
- **Minimum operations**
- **Less chance of error**
- **Fast response**
- **Auto pre-announce**
- **Page de-activation timer**

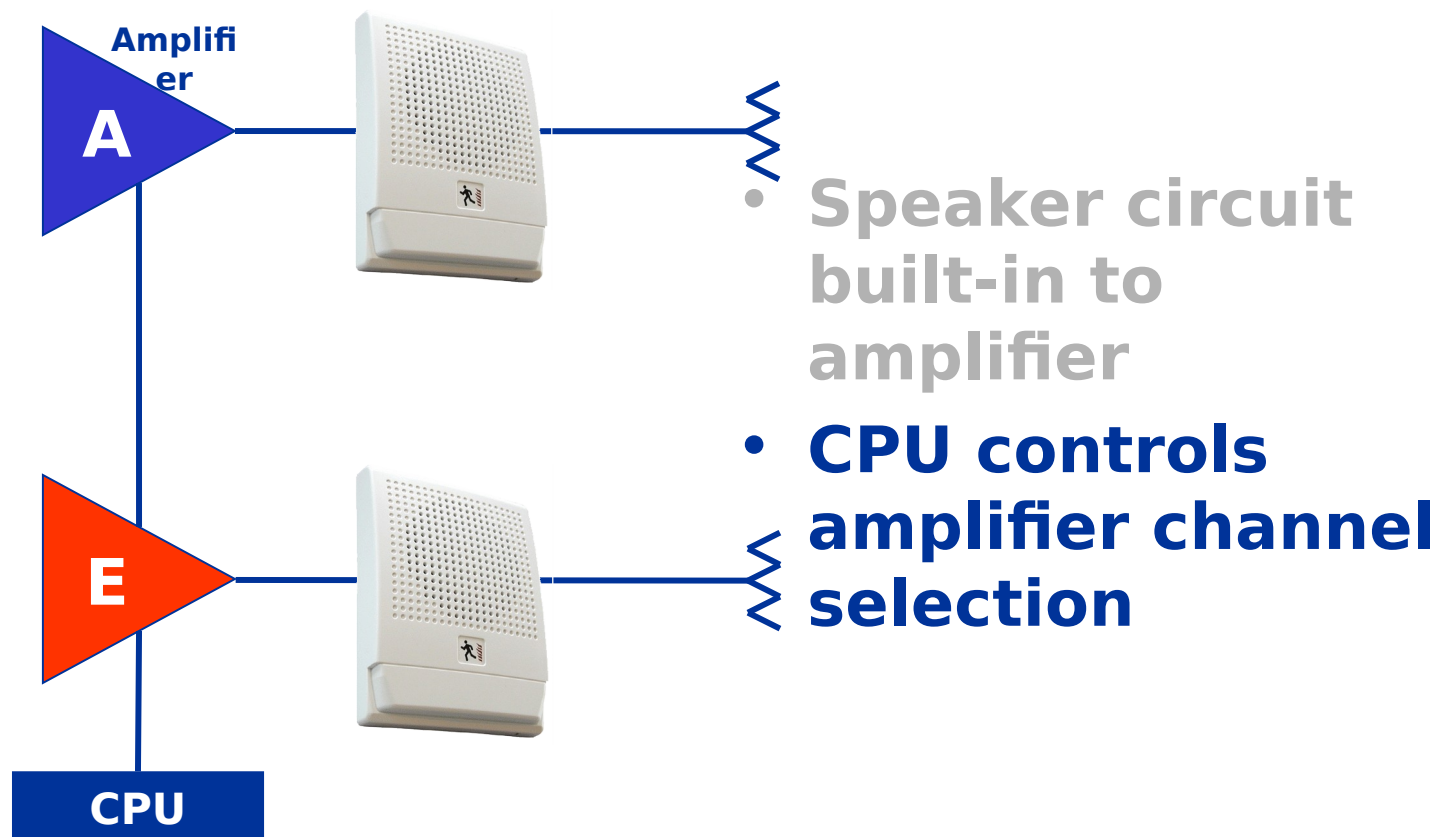
Zoned Audio Amplifiers



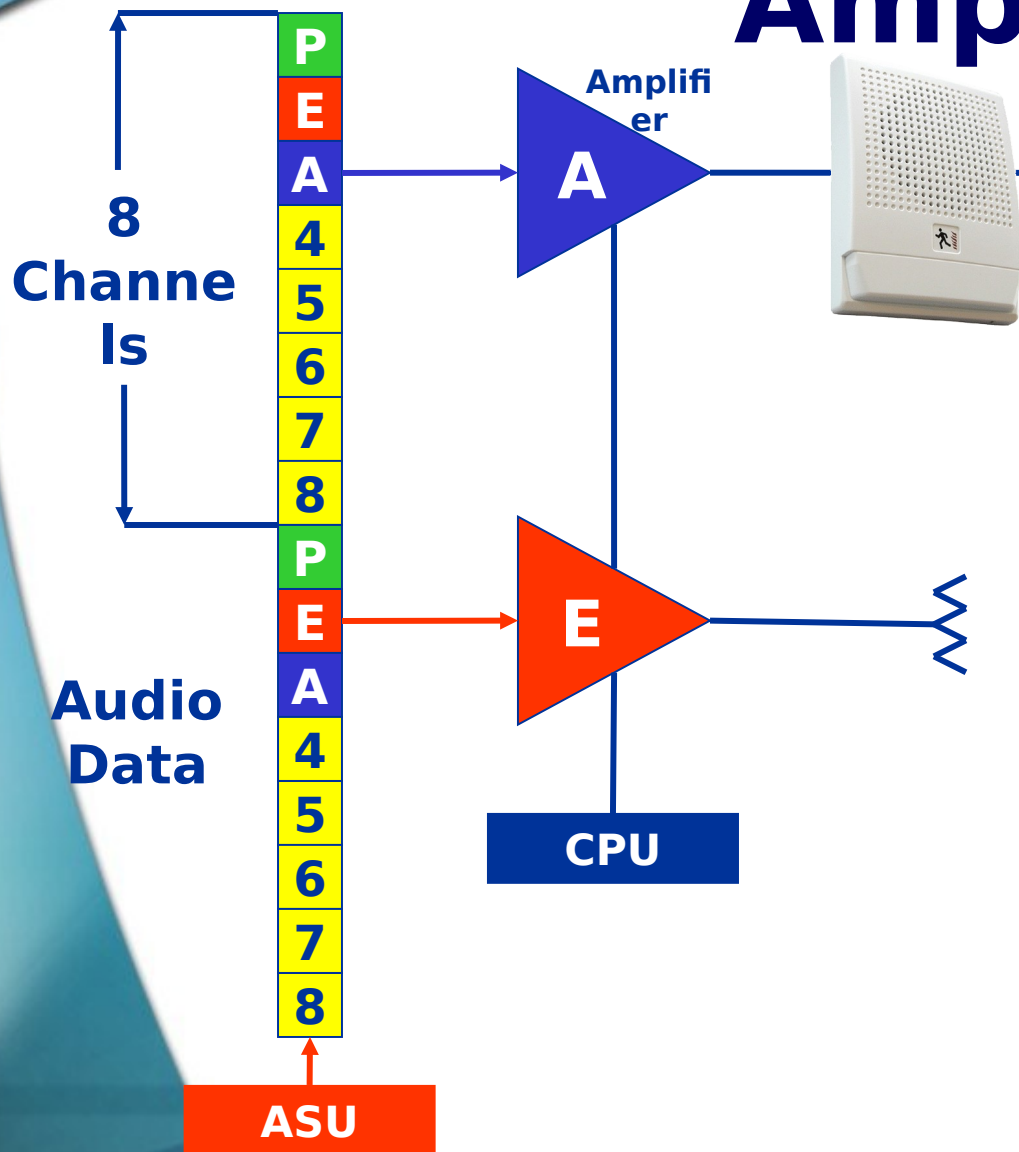
- Speaker circuit built-in to amplifier



Zoned Audio Amplifiers

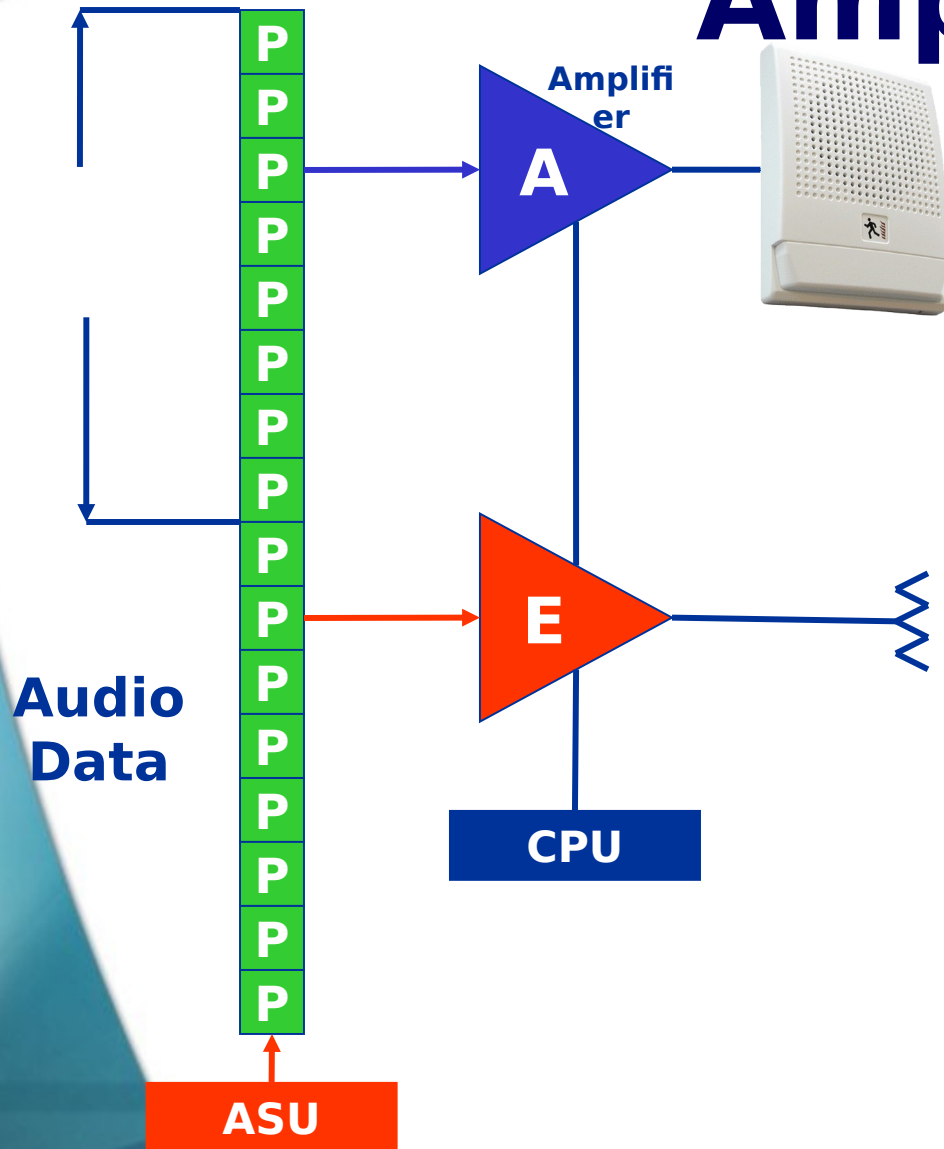


Zoned Audio Amplifiers



- Speaker circuit built-in to amplifier
- CPU controls amplifier channel selection
- Amps take network audio data from the local rail

Zoned Audio Amplifiers



- Speaker circuit built-in to amplifier
- CPU controls amplifier channel selection
- Amps take network audio data from the local rail
- **Switch channel contents**

Fast



Evacuation Signaling

**Using 2 Channels
Central Amplifiers vs Zoned
close on installed cost**

S/P	
S	
7	A
6	A
5	E
4	E
3	E
2	A
1	A

Fire

- 4th is fire floor
- Evacuation signaling to fire floor, and floor above and below
- Alert signaling to all other level
- No signaling to stairwells

Page to Evac

Using 2 Channels

	S/P	P/E
S		
7	A	A
6	A	A
5	E	P
4	E	P
3	E	P
2	A	A
1	A	A

Fire

- Pressing Page to Evac selects the **Evac channel** for paging
- Pressing the mic key delivers pre-announce
- User pages to evacuation zones



Page to Alert

Using 2 Channels

	S/P	P/E	P/A
S			
7	A	A	P
6	A	A	P
5	E	P	E
4	E	P	E
3	E	P	E
2	A	A	P
1	A	A	P

Fire

- Pressing Page to Alert selects the **Alert channel** for paging
- Pressing the mic key delivers pre-announce
- User pages to alert zones



All Call Minus

Using 3 Channels
Simplex & Notifier out of
the picture due to cost

	S/P	P/E	P/A	ACM
S				P
7	A	A	P	A
6	A	A	P	A
5	E	P	E	E
4	E	P	E	E
3	E	P	E	E
2	A	A	P	A
1	A	A	P	A

Fire

- Pressing All Call Minus selects any amplifier **not programmed to signaling** for page
- Pressing the mic key delivers pre-announce
- User pages to stairwells

All Call

Fast

Using all Channels

	S/P	P/E	P/A	ACM	A/C
S				P	P
7	A	A	P	A	P
6	A	A	P	A	P
5	E	P	E	E	P
4	E	P	E	E	P
3	E	P	E	E	P
2	A	A	P	A	P
1	A	A	P	A	P

Fire

- Pressing All Call selects all channels for paging
- Pressing the mic key delivers pre-announce
- User pages to all amplifier zones



Zone Page to 4th

**Using 3 Channels
Simplex & Notifier out of
the picture due to cost**

	S/P	P/E	P/A	ACM	A/C	Z/P	
S				P	P		
7	A	A	P	A	P	A	
6	A	A	P	A	P	A	
5	E	P	E	E	P	E	
4	E	P	E	E	P	P	Fire
3	E	P	E	E	P	E	
2	A	A	P	A	P	A	
1	A	A	P	A	P	A	

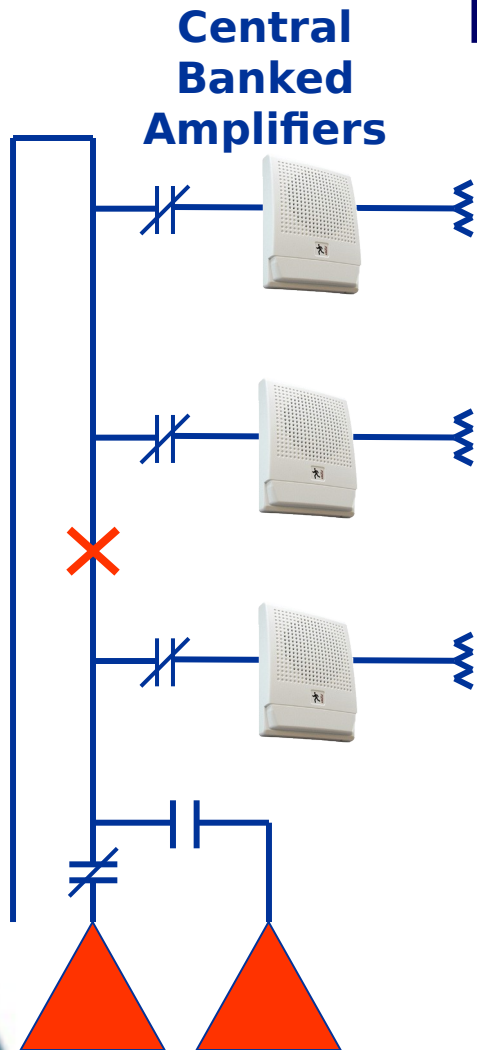
- Pressing a zone page switch notifies amplifier to 'ready for page'
- Pressing the mic key switches the amplifier to the page channel and delivers pre-announce tone



Zoned Audio Amplifiers

- **Advantages of Zoned Amplifiers over Central Amplifier Systems**
 - **Reliability**
 - **Performance**
 - **Installed Cost**

Reliability

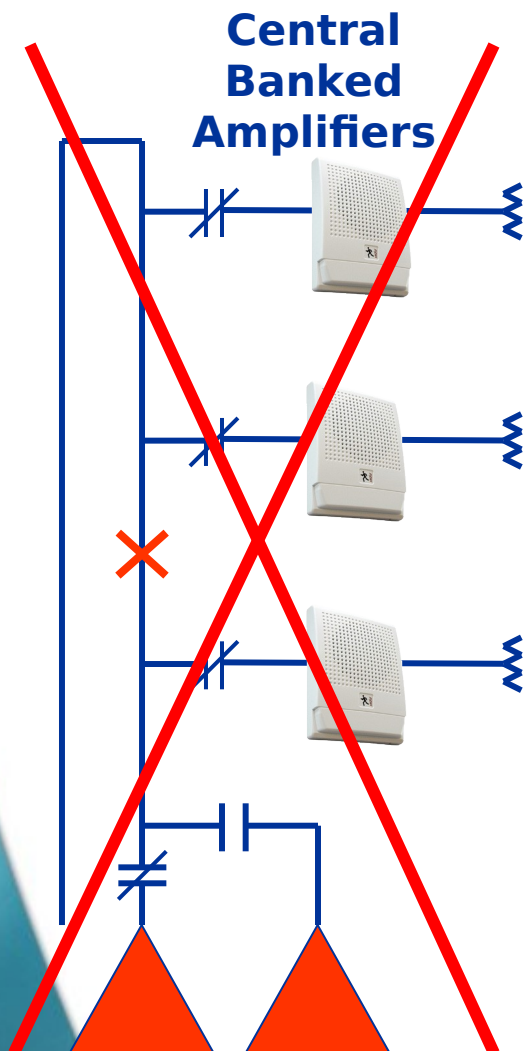


- **Single Point of failure**
- **Lose ALL circuits**
- **NOT power limited**
 - **Needs separate conduit to meet code**
- **Picks up noise**

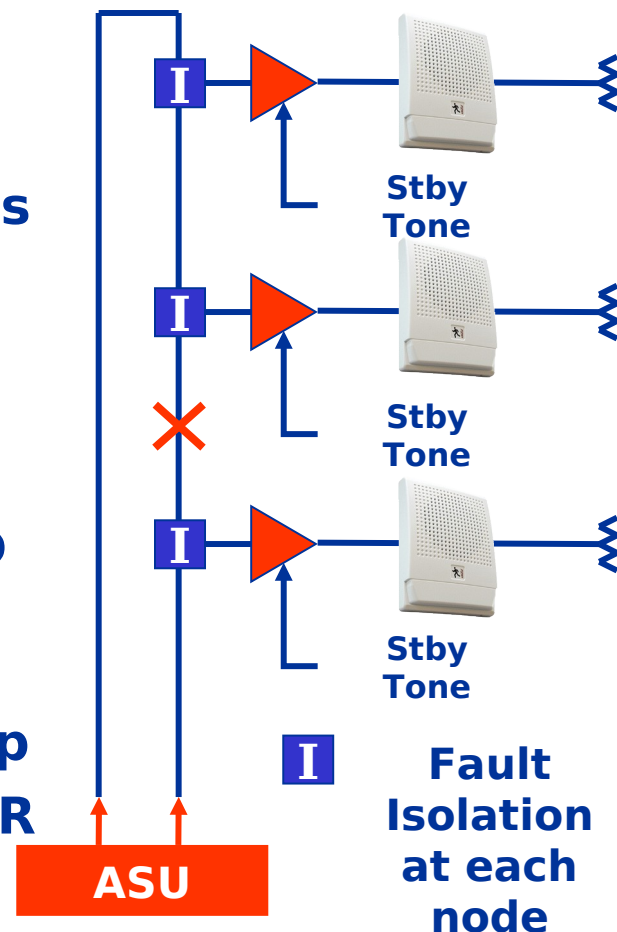
Reliability



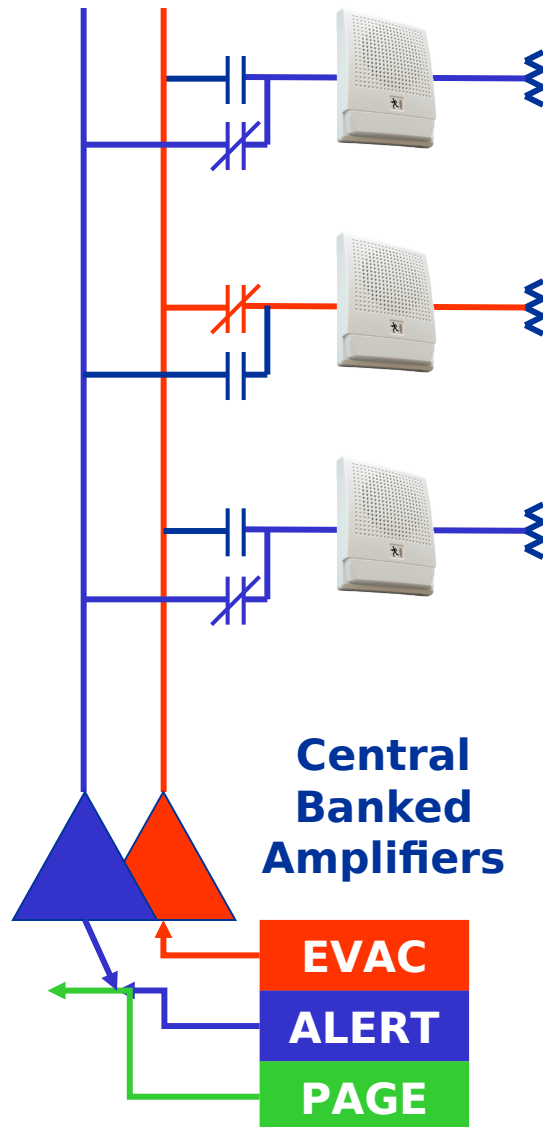
EST3 Zoned Amplifiers



- Survives Single Riser Short
- loose NO circuits
- standby tone if multiple faults
- allows standby amplifier / node
- **POWER LIMITED**
 - run in same conduit
- NO noise pick up
- Can run as FIBER



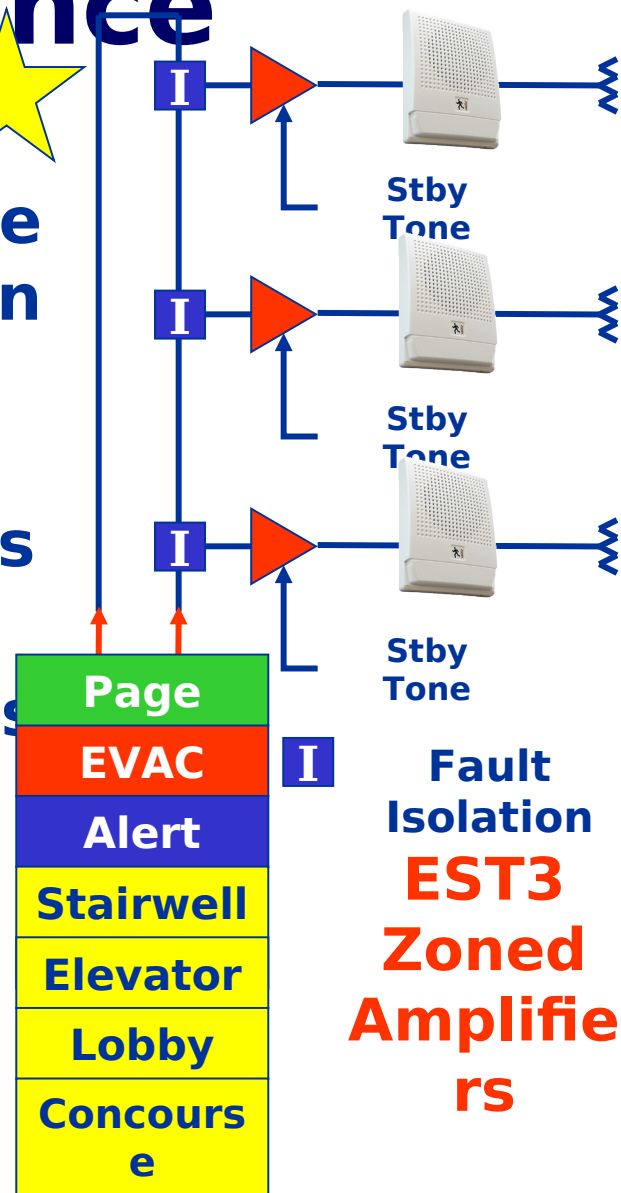
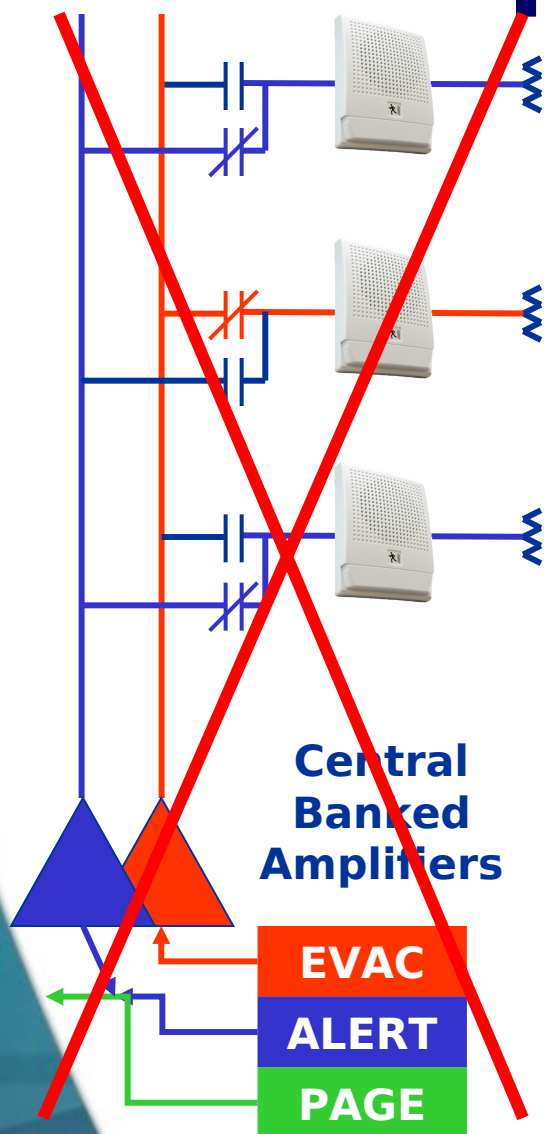
Performance



- **Interrupted messaging**
- **Turn off ALERT to page**
 - to an alert floor
 - to a stairwell
 - to the lobby
 - elevator
 - concourse

Zone Amplifier Performance

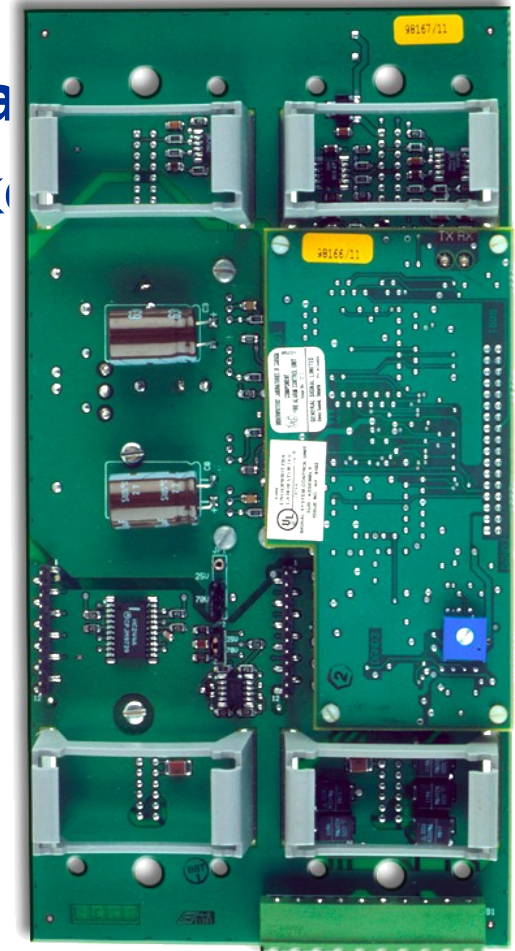
- No message interruption
- Allows specific instructions
- Safer evacuations



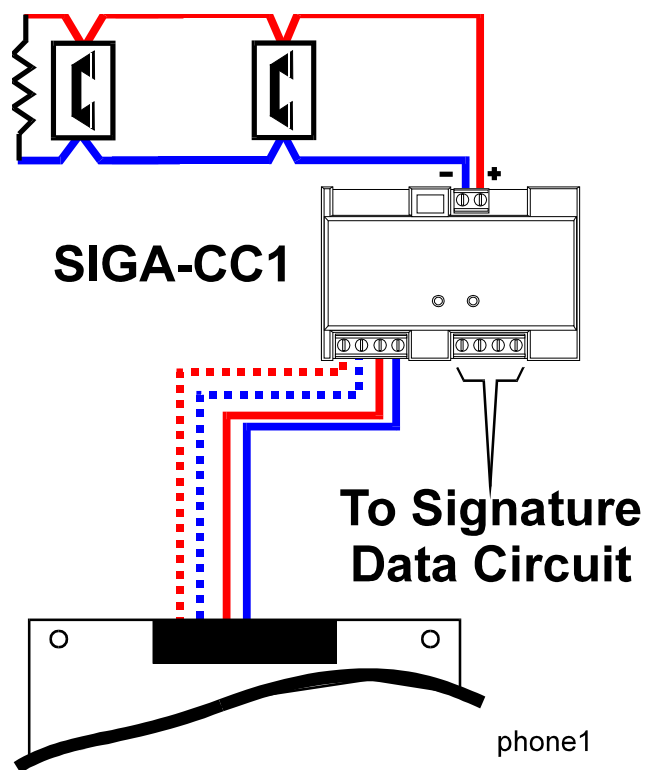
Fault Isolation
EST3
Zoned Amplifiers

Zoned Audio Amplifiers

- Available in 20, 40, & 90 watt
- Mount to rail, 20 & 40w take 1 space; 90w, 2
- C/W NAC, Class 'A' or 'B'
 - One 3.5A circuit per amplifier on 20 or 40w only
 - No additional space required
 - Supports ADA compliance



Emergency Telephone



- Riser from fire phone card to SIG-CC1 modules
- CC1 controlled by data circuit
- Class 'A' or 'B'
- Ring tone

ASU /w Fire Phone



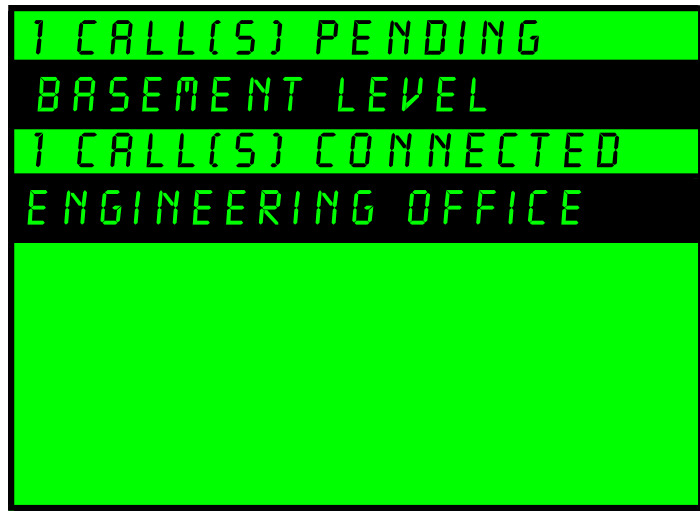
- **ASUFT**
- **Complete chassis**

Fire Phone Control



- **8 x 20 Liquid Crystal Display**
- **Language display of calls**
- **20 character location message**

Fire Phone LCD

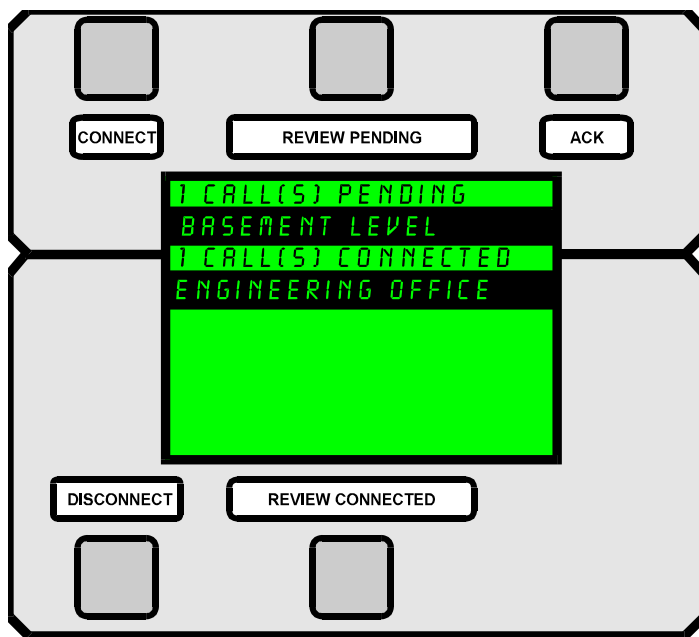
A screenshot of a Fire Phone LCD display. The screen is divided into four horizontal sections. The first section is black with green text that reads "1 CALL(S) PENDING". The second section is black with green text that reads "BASEMENT LEVEL". The third section is black with green text that reads "1 CALL(S) CONNECTED". The fourth section is black with green text that reads "ENGINEERING OFFICE". Below these sections is a large, solid black rectangular area.

1 CALL(S) PENDING
BASEMENT LEVEL
1 CALL(S) CONNECTED
ENGINEERING OFFICE

telcd2

- Calls pending
- Pending list
- Calls connected
- Five lines individually list connected calls

Fire Phone Selection Controls



telcd1

- **Connect**
- **Review Pending**
- **Ack**
- **Disconnect**
- **Review Connected**



EST3 Paging & Fire Phone Hardware

Thank You!

